

## Efek antijamur minyak atsiri jahe merah (*Zingiber officinale* var. *rubrum*) terhadap *Candida albicans*

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### Abstrak

The prevalence of *Candida albicans* infections is increasing in the society. Therefore, an effective and affordable antifungal drug with minimal side effect is needed. Ginger (*Zingiber officinale*) is a traditional herb which has an antifungal effect in its volatile oil. Objective: to investigate antifungal effect of volatile oil from *Zingiber officinale* var. *rubrum* against *C. albicans* in vitro, to determine the optimum concentration, and finally to determine the correlation between the various concentrations of the oil and the inhibition zone. Material and method: Strain *C. albicans* tested was obtained from the Department of Parasitology, Medical Faculty, University of Indonesia. Volatile oil of *Zingiber officinale* var. *rubrum* was produced from water and steam distillation of fresh ginger in BALLITRO, Bogor. Concentrations of the volatile oil used were 100%, 50%, 25%, 12.5%, 3.125%, 1.56% and 0.78%. Methods used were colony counting and disk diffusion method (by using 6 mm blank disk). The specimens were divided into two groups, treatment group (*C. albicans* with application of volatile oil) and control group (*C. albicans* without application of volatile oil). Result: There was a significant decrease in the amount of *C. albicans* colonies from 3.125% to 6.25% of concentration. The amount of *C. albicans* colonies at concentration 6.25% was also significantly lower than in the control group. Moreover, there was strong and positive correlation between the concentration of the volatile oil and the inhibition zone. Conclusion: Volatile oil from *Zingiber officinale* var. *rubrum* has an antifungal effect against *C. albicans* in vitro with optimum concentration at 6.25%. Increasing concentrations of the oil correlates with increasing inhibition zone.